

IN THE CLAIMS:

1 1. (Currently Amended) An improved method of oxidizing undesirable compounds
2 residing within a liquid based gas processing system comprising:

3 (a) first heating a liquid absorbent containing undesirable compounds within a
4 reboiler chamber to its boiling temperature, which is a temperature above the boiling point of water
5 and below the temperature of degradation of said absorbent, to produce vaporized effluents;

6 (b) condensing said effluents within a condenser;

7 (c) transporting residual uncondensed effluents to and through a vaporizer
8 wherein said effluents are first heated to re-vaporize any ambient condensed liquids;

9 (d) transporting and introducing said re-vaporized effluents to a thermal oxidizer
10 combustion chamber combined and integrated with said reboiler but fluidly separate therefrom
11 ~~separate from some reboiler~~ wherein said re-vaporized effluents are second heated to a temperature
12 necessary to effectuate virtually complete thermal destruction of undesirable compounds;

13 (e) transporting and introducing said ~~second heated~~ thermally destroyed effluents
14 from said thermal oxidizer combustion chamber to and through the internal portions of a heat
15 recovery tube bundle, said introduction and transport generating external tube surface temperatures
16 sufficient to raise a liquid glycol based absorbent in contact therewith to its boiling temperature; ~~and~~

17 (f) transporting said second heated effluent from said tube bundle to and through
18 a reboiler vent stack; and

19 (g) means to regulate said external tube surface temperatures by a controlled
20 venting mechanism having a venting mechanism in a vent stack of said thermal oxidizer chamber
21 coordinated with a vent mechanism in said reboiler vent stack.

1 2. (Previously Amended) The method as set forth in Claim 1 wherein said absorbent
2 is diethylene glycol.

1 3. (Original) The method as set forth in Claim 1 wherein said absorbent is triethylene
2 glycol (TEG).

1 4. (Original) The method as set forth in Claim 1 wherein said absorbent is one of a
2 group of absorbents including ethylene glycol, tetraethylene glycol or glycerin.

1 5. (Previously Amended) The method as set forth in Claim 1 wherein said undesirable
2 compounds include benzene, toluene, ethylbenzene and xylene.

1 6. (Currently Canceled)

1 7. (Currently Canceled)

1 8. (Currently Canceled)

1 9. (Original) The method of Claim 1 further comprising the step of sparging said
2 absorbent while said absorbent traverses the internal portion of a sparging or stripping pipe located
3 within said reboiler.

1 10. (Original) The method of Claim 1 wherein the transporting of said partially
2 condensed effluents to and through a vaporizer means further comprises the step of collecting non-
3 vaporized effluents in a reservoir.

1 Claims 11 through 24 (Withdrawn)

1 25. (Currently Canceled)